UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/555,076	03/02/2006	Toshiyuki Takagi	SNKYO126512	3081

26389 7590 07/25/2007

CHRISTENSEN, O'CONNOR, JOHNSON, KINDNESS, PLLC
1420 FIFTH AVENUE
SUITE 2800
SEATTLE, WA 98101-2347

EXAMINER	
BETTON, TIMOTHY E	

ART UNIT	PAPER NUMBER
1614	

MAIL DATE	DELIVERY MODE
07/25/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/555,076	TAKAGI ET AL.	
	Examiner	Art Unit	
	Timothy E. Betton	1614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 41-62 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 41-62 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 4 sheets.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejection-35 USC 112,2ND paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claim 41, and 43-47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "enhancement" in claim 41 is a relative term, which renders the claims indefinite. The term "enhancement" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

In the instant specification, the term “enhancement” is disclosed throughout the instant specification, however there is no requisite degree in which to either define or measure the term “enhancement” in order to clarify description drawn to instant invention. The applicants’ disclose no written description and/ or meaning commensurate in view of the claims for the term “enhancement”.

Claims 43-47 and 59-61 recite the limitation "A method” dependent from instant claim 41. However, instant claims 43-47 and 59-61 should recite the limitation “The method”, dependent from independent base claim 41, which recites “A method”. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejection –35 USC 112, 1st paragraph

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 41-62 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for compounds of the invention which are useful for inhibiting amyloidosis in disorders in which such amyloid deposition occurs, does not reasonably provide enablement for compounds of the invention which are useful for inhibiting amyloidosis in disorders in which such amyloid deposition occurs such as diabetes. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

Factors to be considered in determining whether a disclosure would require undue experimentation have been summarized in Exparte Forman, 230 USPQ 546 (BPAI 1986) and reiterated by the Court of Appeals in In re Wands, 8 USPQ2d 1400 at 1404 (CAFC 1988). The factors to be considered in determining whether undue experimentation is required include:

1) the quantity of experimentation necessary

2) the amount of direction or guidance provided

3) the presence or absence of working examples

4) the nature of the invention

5) the state of the art

6) the relative skill of those in the art

7) the predictability of the art and

8) the breadth of the claims

The Board also stated that although the level of skill in the pertinent art is high, due to the multiplicity and variability of the diabetic disease state, whether type I or type II. While all these factors are considered, a sufficient amount for a prima facie case are discussed below:

The nature of the invention

The nature of the instant invention is highly complex.

The amount of direction or guidance provided

There is an insufficient amount of direction or guidance commensurate in scope toward methods of prevention. The term prevention is cited numerously throughout the instant specification; however, there is no direction or guidance to suggest total eradication, i.e., prophylaxis and/or prevention.

The quantity of experimentation necessary

The quantity of experimentation is high. One of ordinary skill in the pertinent would instantly recognize the necessity for due experimentation. In the case of the instant specification, applicants have disclosed embodiments within the specification

drawn to treatment. However, there are no embodiments within instant specification, which suggest the instant invention preventing the disease. Comparative analysis and results properly elucidating a preventive step is lacking.

The predictability in the art

The unpredictability in the art is high due to the variable susceptibilities of the diseases states disclosed. There is no guidance in the specification as to how to determine and select a population of individuals, which may or may not eventually have hypoadiponectinemia, metabolic syndrome, diabetes, and complications thereof. Preventing a disease is just as complex and unpredictable a process. It is not clear what parameters one skilled in the art would use in order to identify a population of subjects in which the disease could be prevented. It is also not clear what symptoms one of skill in the art would need to identify before possibly treating a patient. While it is art known that clinicians are capable of implementing both screening and surveillance and the type of screening test used and the intervals at which it is performed are based on risk stratification, which also serves as the basis for selecting potential candidates for possible prevention. However, like most screening procedures determining whether a population will eventually contract said disease is not foolproof. There is insufficient evidence provided enabling one of ordinary skill in the art to determine susceptible Syndrome X candidates within a population. The specification provides neither guidance on nor exemplification of identifying a population of people who may eventually have Syndrome X. Furthermore, if such a group was identified there is

insufficient evidence provided that the metabolic syndrome/ diabetic event would be inhibited with the administration of one or more of a HMG-CoA reductase inhibitors.

Claim Rejection- 35 USC §103(a)

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Joint Inventors

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 41-62 are rejected under 35 U.S.C. 103(a) as being unpatentable Lohray et al. (USPN 6,130,214) in view of Ikeda et al. (USPN 6,384,062).

For exemplary purposes, the synthesis, properties and characteristics of adiponectin/adipocytes are well known in the pertinent art. Adiponectin, predominantly

synthesized in the adipose tissue, seems to have substantial anti-inflammatory properties and to be a major modulator of insulin resistance and dyslipidemia, mechanisms that are associated with an increased atherosclerotic risk in diabetic patients (Schulze et al., Adiponectin and Future coronary Heart Disease Events Among Men with Type 2 Diabetes, Diabetes (2005), 54:534-539, printed pages 1-6).

Thus, instant referenced publication teaches adiponectin as a major modulator of dyslipidemia. The instant claims of alleged invention disclose HMG CoA reductase inhibitors, i.e., pravastatin and rosuvastatin in particular. These said agents are effective against dyslipidemia and conditions thereof. By virtue of the mechanism of action of agents such as pravastatin, adiponectin is likely to increase in instances as typical characteristic and property of HMG CoA- reductase inhibitors treatment.

Lohray et al. teach novel antiobesity and hypocholesterolemic compounds, their derivatives, their analogs, their tautomeric forms, their stereoisomers, their polymorphs, their pharmaceutically acceptable salts, their pharmaceutically acceptable solvates and pharmaceutically acceptable compositions containing them. More particularly, the present invention relates to novel .beta.-aryl-.alpha.-oxysubstituted alkylcarboxylic acids of the general formula (I), their derivatives, their analogs, their tautomeric forms, their stereoisomers, their polymorphs, their pharmaceutically acceptable salts, their pharmaceutically acceptable solvates and pharmaceutically acceptable compositions containing them (Abstract).

Lohray et al. teach compounds useful in the reducing body weight and for the treatment and/or prophylaxis of diseases such as hypertension, coronary heart disease,

atherosclerosis, stroke, peripheral vascular diseases and related disorders. These compounds are useful for the treatment of familial hypercholesterolemia, hypertriglyceridemia, lowering of atherogenic lipoproteins, very low-density lipoprotein (VLDL) and LDL. The compounds of the present invention can be used for the treatment of certain renal diseases including glomerulonephritis, glomerulosclerosis, nephrotic syndrome, hypertensive nephrosclerosis, and retinopathy nephropathy. The compounds of general formula (I) are also useful for the treatment/prophylaxis of insulin resistance (type II diabetes), leptin resistance, impaired glucose tolerance, dyslipidemia, disorders related to syndrome X such as hypertension, obesity, insulin resistance coronary heart disease, and other cardiovascular disorders. These compounds may also be useful as aldose reductase inhibitors, for improving cognitive functions in dementia, treating diabetic complications, disorders related to endothelial cell activation, psoriasis, polycystic ovarian syndrome (PCOS), inflammatory bowel diseases, osteoporosis, myotonic dystrophy, pancreatitis, arteriosclerosis, xanthoma and for the treatment of cancer. The compounds of the present invention are useful in the treatment and/or prophylaxis of the above said diseases in combination/concomittant with one or more HMG CoA reductase inhibitors or hypolipidemic/hypolipoproteinemic agents such as fibric acid derivatives, nicotinic acid, cholestyramine, colestipol, probucol (column 1, lines 43-67; column 2, lines 1-6).

Ikeda et al. teach a pharmaceutical composition which comprises an insulin sensitivity enhancer in combination with other antidiabetics differing from the enhancer

in the mechanism of action, which shows a potent depressive effect on diabetic hyperglycemia and is useful for prophylaxis and treatment of diabetes (Abstract).

Ikeda et al teach the administration of pravastatin and its sodium salt, which is interchangeable with the 'water soluble' limitation in instant claims of subject invention.

Ikeda et al. teach the administration of pravastatin for the disease states and conditions, which make the embodiments in instant specification and instant claims obvious (column 18, lines 21- 22; lines 35- 36).

Thus, it would be prima facie obvious to one of ordinary skill in the pertinent art to at once recognize at the time of invention the reasonable expectation of success via the combining of the compositions and methods of Lohray et al. with the compositions and methods of Ikeda et al. Ikeda et al. teaches the motivation to incorporate together, thereby making the claim of instant invention obvious.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy E. Betton whose telephone number is (571) 272-9922. The examiner can normally be reached on Monday-Friday 8:30a - 5:00p. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin H. Marschel can be reached on (571) 272-0718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TEB

Frederick Krass
Primary Examiner
Art Unit 1614